

Technical notes¹

Table 1 (Estimates of mid-year population and vital statistics summary: 1948–1997) presents a summary of population and vital statistics data including in the following order: mid-year estimates of the total population, live births and crude birth rates, deaths and crude death rates, rates of natural increase and infant deaths and infant mortality rates for as many years as possible between 1948 and 1997.

Description of variables: Mid-year population estimates refer to the de facto population on 1 July. In some cases the mid-year population has been calculated by the Statistics Division of the United Nations as the mean of two year-end official estimates. Mid-year estimates, calculated in this manner, are assumed to be sufficiently similar to official estimates for the population on 1 July; they, therefore, have not been foot-noted.

Mid-year estimates of the total population are those provided by national statistical offices, unless otherwise indicated. As needed, these estimates are supplemented by mid-year population estimates prepared by the Population Division of the United Nations Secretariat [17] when, for example, official mid-year estimates of the total population are either not available or have not been revised to take into account the result of a recent population census or sample survey. The United Nations Secretariat estimates are identified with a superscript "x" and are based on data available in 1996 including census and survey results, taking into account the reliability of available base data as well as available fertility, mortality, and migration data.

The vital events used to calculate rates in this table are defined [18] as follows:

LIVE BIRTH is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which after such separation, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered live born regardless of gestational age.

DEATH is the permanent disappearance of all evidence of life at any time after live birth has taken place (post-natal cessation of vital functions without capability of resuscitation). This definition therefore excludes foetal deaths.

¹ Demographic Yearbook Historical Supplement 1948–1997, United Nations DYB-CD, Sales No.: E/F.99.XIII.12, United Nations Publications New York, Geneva

In addition to this definitions, infant deaths are deaths of live-born infants under one year of age.

Crude birth rates and crude death rates presented in the table are calculated using the number of live births and the number of deaths obtained from civil registers. These civil registration data are used only if they are considered reliable (estimated completeness of 90 per cent or more). If, however, registered births or deaths for any given country or area, are less than 90 per cent complete, then estimated rates are also presented. First priority is given to estimated rates provided by the individual countries or areas. If suitable official estimated rates are not available, then rates prepared by the Population Division of the United Nations Secretariat[19] are presented. It should be noted that in the case of some small countries or areas for which civil registration is estimated to be less than 90 per cent complete, and for which no estimated rates are available, rates calculated using these data are presented. These rates appear in italics.

Similarly, infant mortality rates presented in this table are calculates using the number of infant deaths obtained from civil registers. If, however, the registration of infant deaths for any given country or area is estimated to be less than 90 per cent, complete, then official estimated rates are presented when possible. When no suitable estimated rates are available, rates calculated using unreliable vital statistics are presented. These rates appear in italics.

Rate computation: The crude birth and death rates are the annual number of births and deaths, respectively per 1 000 mid-year population. Rates of natural increase are the difference between the crude birth rate and the crude death rate.

Infant mortality rates are the annual number of deaths of infants under one year of age per 1 000 live births in the same year.

Rates which appear in this table have been calculated by the Statistics Division of the United Nations unless otherwise noted. The exceptions include official estimated rates, many of which were based on sample surveys, and rates, estimated by the Population Division of the United Nations Secretariat.

Rates, calculated by the Statistics Division of the United Nations, presented in this table have not been limited to those countries or areas having a minimum number of events in a given year. However, rates based on 30 or fewer live births, deaths or infant deaths are identified by the symbol ().

Reliability of data: Each country or area has been asked to provide information on the method it has used in preparing the official mid-year population estimates shown in this table. Information referring to the 1997 estimates has been coded and appears in the

column entitled "Type" in table 3 in the volume containing the general tables. The four elements of the quality code which appear in this column relate to the nature of the base data, the recency of the base data, the method of time adjustment and the quality of that adjustment, respectively. This quality code is explained in detail in section 3.2.1 of the Technical Notes. It should be noted briefly here, however, that the codes "A" and "B" refer to estimates which are based on complete census enumerations and sample surveys, respectively. Code "C" refers to estimates based on a partial census or partial registration of individuals while code "D" refers to conjecture. The figures which appear as the second element in the quality code indicate the number of years elapsed since the reference year of the base data.

This quality code is the basis of determining which mid-year estimates are considered reliable. In brief, reliable mid-year population estimates are those which are based on a complete census (or on a sample survey) and have been adjusted by a continuous population register or adjusted on the basis of the calculated balance of births, deaths and migration. Mid-year estimates of this type are considered reliable and appear in roman type. Mid-year estimates which are not calculated on this basis are considered less reliable and are shown in italics. Estimates for years prior to 1997 are considered reliable or less reliable on the basis of the 1997 quality code and appear in roman type or in italics accordingly.

Data from civil registers of live births, deaths and infant deaths which are reported as incomplete (less than 90 per cent completeness) or of unknown completeness are considered unreliable and are set in italics rather than in roman type. For more information about the quality of vital statistics data in general, and the information available on the basis of the completeness estimates in particular, see section 4.2 of the Technical Notes.

The designation of vital statistics as being either reliable or unreliable is discussed in general in section 4.2 of the Technical Notes. The Technical Notes for tables 9, 15 and 18 in the volume containing the general tables provide specific information on the reliability of statistics on live births, infant deaths and deaths, respectively.

Rates calculated on the basis of registered vital statistics which are considered unreliable (estimated to be less than 90 per cent complete) also appear in italics. Estimated rates, either those prepared by the individual countries or areas or those prepared by the Population Division of the United Nations Secretariat, have been presented whenever possible in place of rates calculated using unreliable vital statistics.

Limitations: Statistics on estimates of the mid-year total population and vital statistics data are subject to the same qualifications as have been set forth for population and vital statistics in sections 3 and 4 of the Technical Notes, respectively.

A most important limitation affecting mid-year population estimates is the variety of ways in which they have been prepared. Quality codes describing the method of the preparation of the 1997 estimates appear in table 3 in the volume containing the general tables. These quality codes are discussed in detail in the Technical Notes for that table and in section 3.2.2 of the Technical Notes for this volume.

It should be noted here that because the reliability of the population estimates for any given country or area is based on the quality code for the 1997 estimate, the reliability of estimates prior to 1997 may be overstated.

The mid-year estimates prepared by the Population Division of the United Nations Secretariat, used to supplement official data in this table, have the advantage of being prepared by a consistent methodology. However, it is very important to note that, among countries or areas, the actual amount of data and the quality of those data upon which the estimates were based, vary considerably.

In assessing comparability of vital statistics it is important to take into account the reliability of the data as discussed above.

It should be noted that the crude rates are particularly affected by the age-sex structure of the population. Infant mortality rates, and to a much lesser extent crude birth rates and crude death rates, are affected by the variation in the definition of a live birth and tabulation procedures.

Coverage: Mid-year population estimates and vital statistics are shown for 234 countries or areas.

17. Source: World Population Prospects: Estimates and Projections as Assessed in 1996.

18. Principles and Recommendations for a Vital Statistics System (United Nations publication, Sales No.E.73.XVII.9),para. 46.

19. Source: World Population Prospects: Estimates and Projections as Assessed in 1996.